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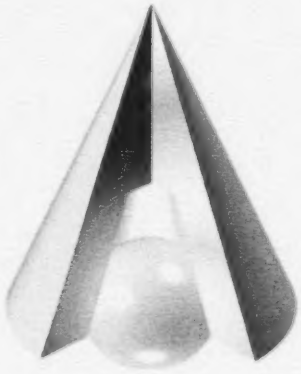
Labour Market Outcomes of Immigrant Women who Arrive as Dependants of Economic Immigrant Principal Applicants



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x suppressed to meet the confidentiality requirements of the *Statistics Act*
^{E} use with caution
F too unreliable to be published
* significantly different from reference category ($p < 0.05$)

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Abstract

Women who arrived in Canada as spouses of economic immigrant principal applicants were better educated and more likely to know English or French than married women who arrived in the family class. Their higher levels of human capital are related to a high degree of positive assortative mating. This study uses the 2011 National Household Survey linked to the Immigrant Landing File to examine how these differences in human capital characteristics translate into differences in labour market outcomes. Together, differences in individual characteristics and selected job characteristics accounted for nearly 70% of the observed earnings gap between female spouses of economic immigrant principal applicants and married women in the family class. These results suggest that economic immigration programs, which assess and select principal applicants based on their human capital, also indirectly selected immigrant spouses with high levels of human capital and labour market involvement.

Keywords: immigrants, women, immigration category, labour market outcomes

Executive summary

Programs in the economic stream of immigration select immigrants for their perceived ability to integrate into the Canadian labour market. However, it is mainly the principal applicants, mostly men, who are assessed. They in turn bring with them spouses and dependent children. This study examines the characteristics and labour market outcomes of women who arrived as spouses of economic immigrant principal applicants. Their characteristics and outcomes are compared with those of other economic immigrants (male and female principal applicants and male spouses) and with married women who arrived in the family class.

Women who arrived as economic immigrant spouses and women who arrived in the family class were admitted to Canada for reasons other than their skills. Despite this similarity, their circumstances differ in ways that could affect their post-migration labour market outcomes. Spouses of economic immigrant principal applicants may be indirectly selected by the immigration system; that is, their human capital characteristics may be higher than those of family class immigrants because of positive assortative mating. At the same time, women in the family class are joining close family members who are already established in Canada, and possess knowledge of the Canadian labour market that newcomers likely do not have. How labour market outcomes compare between these two groups of women is an empirical question.

This study is based on data from the linked 2011 National Household Survey and the Immigrant Landing File database. The focus is on economic immigrants who arrived as skilled workers, provincial nominees, or in the Canadian experience class. The main sample for the analysis consists of economic immigrant couples who landed between 1990 and 2009 and were aged 25 to 64 in 2011. The family-class comparison sample consists of women who landed during the same period, were married or living common law at the time of landing, and were aged 25 to 64 in 2011.

Compared with wives and female common-law partners who arrived in the family class, those in the economic class had higher levels of education and knowledge of official languages at landing, and higher employment and earnings after landing. Higher levels of human capital, along with visible minority status and area of residence, accounted for some 60% of the gap in employment observed between women who arrived as economic immigrant spouses and married women who arrived in the family class, and for nearly half of the gap in log earnings. Differences in the incidence of part-time employment and occupation accounted for a further 20% of the gap in log earnings.

Compared with male and female economic principal applicants and male spouses, women who arrived as spouses of economic principal applicants had lower levels of education and knowledge of official languages at landing, and lower levels of employment and earnings after landing. Differences in human capital do not appear to have accounted for much of the observed employment and earnings gaps between male principal applicants and their spouses. Occupation and incidence of part-time employment, however, accounted for a substantial part of the earnings gap between the two groups.

The results of the study suggest that the economic immigration programs examined, which assess and select principal applicants based on their human capital, also indirectly selected immigrant spouses with higher levels of human capital and labour market involvement than was observed among family members who arrived through the family class.

1 Introduction

Many immigrants come to Canada with spouses and dependants. In the economic class, principal applicants are selected for their perceived ability to integrate into the Canadian labour market. The spouses who accompany them are not.[1] At the same time, within a couple, the person who better meets the selection criteria of an immigration program, e.g., human capital requirements, is likely to apply as the principal applicant (Banerjee and Phan 2015). This suggests that spouses of economic immigrant principal applicants may have lower levels of human capital and ability to succeed in the Canadian labour market than the principal applicants. On the other hand, spouses of principal applicants could look more like the principal applicants than other immigrants in terms of human capital through positive assortative mating, that is, the tendency of people to marry individuals similar to themselves.[2] All of this leads to the question of whether the points system of selecting economic immigrants, which directly selects the principal applicant, also indirectly selects a second immigrant with similar characteristics.

How does one test the notion that the points system in fact selects two immigrants with high human capital instead of just one, when a married principal applicant makes it through the immigration system? Comparing characteristics and labour market outcomes of principal applicants and their spouses is the obvious first step. However, the vast majority of principal applicants are men (Hou and Bonikowska 2015), and hence the vast majority of the economic immigrant spouses are women. Finding lower levels of human capital and less involvement in the labour market among the latter group would not be surprising, given the existing literature on immigrant outcomes. A better test would be to compare the characteristics and outcomes of the spouses with those of other immigrants admitted to Canada for reasons other than their skills. Immigrants admitted for reasons of family reunification constitute the most natural comparison group.

Given that the majority of spouses of principal applicants in the economic class are women, they are the focus of the analysis in this study. Female spouses in the economic class are first compared with male principal applicants in the economic class, as well as with female principal applicants and male spouses. Next, they are compared with women who arrived in the family class and were also married or in a common-law relationship at the time of immigration.

In the latter comparison, while both groups of women immigrated as family members rather than as principal applicants, their circumstances differ in potentially important ways. Spouses of economic immigrant principal applicants may be indirectly selected by the immigration system—through positive assortative mating, their human capital characteristics may be higher than those of family class immigrants. At the same time, women in the family class are joining close family members who are already established in Canada and possess knowledge of the Canadian labour market that newcomers do not have. How labour market outcomes compare between these two groups of women is an empirical question.

Much of the Canadian evidence on labour market outcome differences among immigrants who arrived through different immigration programs is based on data from the Longitudinal Survey of Immigrants to Canada (LSIC). The LSIC followed immigrants who landed between October 2000 and September 2001 over a four-year period. However, since this cohort of immigrants arrived around the time of the information technology bust in Canada, it may not be representative of other cohorts. The National Household Survey–Immigrant Landing File (NHS–ILF) linked database used in this study, although cross-sectional in nature, contains information on immigration category, human capital characteristics at landing and labour market outcomes in

1. Recent changes to the skilled worker program introduced a limited number of points for certain characteristics of spouses.
2. In fact, Aydemir (2010) finds evidence of a higher degree of positive assortative mating on education among economic immigrant couples than among immigrants in other visa categories in one cohort of immigrants to Canada.

2010/2011 for a much larger sample of immigrants across many arrival cohorts. This makes the NHS–ILF a superior source of data for the analysis in this study.

2 Literature

Earlier Canadian studies provided evidence of differences in labour market outcomes between economic immigrants and those in the family class using the LSIC. Examining characteristics and labour market outcomes of immigrants six months and two years after landing,[3] Aydemir (2010) shows that among women (non-principal applicants),[4] labour force participation rates are higher among skilled workers than in the family class. Earnings of the two groups start out at a similar level, but they rise faster over the short term for skilled workers.

Sweetman and Warman (2010) utilize all three cycles of the LSIC to study earnings and employment of economic immigrant principal applicants, their spouses and married couples who arrived in the family class. They show that earnings are highest for principal applicants and lowest for the family class, and that these gaps persist for several years after arrival. They find no gender gap in unadjusted earnings of principal applicants, but they do find one among the spouses and in the family class. After controlling for the number of points obtained in the immigrant selection system, a gender gap emerges among principal applicants six months after landing, but there is no earnings or employment gap four years after landing. The study also concludes that the gap in labour market outcomes between skilled worker principal applicants and their spouses is not driven by different returns to characteristics (as measured by the actual or estimated number of points that an immigrant received during the selection process).

Several theories have been put forth for labour market outcome differences between spouses in immigrant couples more generally. Although this study does not focus on gender differences in immigrant outcomes per se, nor does it attempt to test any of the theories, a brief summary of the theories follows as background. The theories highlight the notion that labour market outcomes of immigrants are better understood when looked at within the family and broader cultural contexts. Thus, the family investment hypothesis posits that spouses within a couple share between them the functions of investing in host-country human capital and financing this investment. Wives (typically) take on jobs with low earnings growth potential to support the family while husbands make investments in their human capital for long-term earnings growth, through formal education, on-the-job training, job shopping, etc. Once the husband becomes established, the wife's labour supply might decline. Baker and Benjamin (1997) find evidence of this phenomenon in Canada. Based on more recent cohorts, Cobb-Clark and Connolly (2001) find some evidence for and some against the family investment hypothesis in Australia, while a Canadian study (Adsera and Ferrer 2014) and several U.S. studies (Duleep and Dowhan 2002; Blau et al. 2003; Blau and Khan 2007) show evidence contrary to predictions of the family investment hypothesis. Cobb-Clark and Crossley (2004) suggest that the family investment hypothesis is too narrow to address the heterogeneity in immigrant household behaviour.

Another hypothesis suggests that when families decide to migrate, they do so because of the net income gain of moving that is expected to accrue to the family as a whole (Mincer 1978). However, an overall net gain for an immigrant couple may involve one spouse within the couple with a personal gain from moving and the other spouse with a personal loss. The latter spouse is a "tied" mover, who moved only because of family ties. Thus, the tied mover could experience deterioration of his or her labour market outcomes after moving. This may be one reason why principal applicants have, on average, better labour market outcomes than their spouses. Since most principal applicants are men, the "tied mover" hypothesis may also predict a larger gender

3. The LSIC interviewed immigrants six months, two years and four years after landing.
4. Aydemir (2010) separates principal applicants and dependants in each visa category. No distinction is made between principal applicant and dependant for family class in this study.

gap in labour market activity and earnings among immigrants than among the native born. Using LSIC data, Banerjee and Phan (2015) show that among married, professional or managerial immigrants in the skilled worker class, principal applicants experienced a smaller drop in their occupational status score after migration than did dependent applicants. While the status scores improved for both principal applicants and spouses over the first four years, the gap between them did not close.

Finally, several studies in the United States and in Canada also explored the part that social and cultural norms around gender roles and women's labour market activity in the source country play in determining the labour market activity of immigrant women in host countries. These studies show that there is indeed a correlation between source country characteristics and labour force participation (Antecol 2000, 2003), labour force supply assimilation (Blau, Kahn and Papps 2008; Frank and Hou 2016) and wages (Frank and Hou 2015) of immigrant women in receiving countries.

3 Data and sample

This study is based on data from the 2011 National Household Survey (NHS) and Immigrant Landing File (ILF) linked database. These data contain information on a handful of individual characteristics of immigrants at the time of landing, as well as their characteristics and labour market outcomes surveyed in the NHS.

Three groups of individuals form the sample for this study: economic immigrant couples, women who arrived in the family class and were married or in a common-law relationship at the time of immigration, and Canadian-born couples. The sample of economic immigrants is restricted to immigrants who arrived as skilled workers, through a provincial nominee program or in the Canadian experience class.[5] The sample of economic immigrant couples selected for this analysis includes immigrants who were married or in a common-law relationship at landing and still living together in 2011, who landed between 1990 and 2009, and who were aged 25 to 64 in 2011. The principal applicants were aged 25 to 45 at landing, and their spouses were aged at least 18 at landing (details of sample selection of immigrants in the economic class can be found in the Appendix).

The family class sample consists of women who were married or in a common-law relationship at the time of landing, who were aged 18 or older at landing, who were aged 25 to 64 in 2011, and who landed between 1990 and 2009. Sweetman and Warman (2010) use a family class comparison group that consists of individuals who arrived as couples. They acknowledge that they are likely selecting a sample of parents and grandparents being sponsored by a family member already in Canada. The objective in this study is to select a comparison group with similar family dynamics and post-migration labour market intentions (sponsored parents and grandparents are probably less likely to immigrate to Canada with the intention of establishing working careers than are the spouses or children of the individuals sponsoring them). The majority (80%) of the family class sample in this study was younger than 40 years old at landing, and, thus, unlikely to be parents or grandparents sponsored by immigrants already living in Canada.

Finally, a sample of Canadian-born couples has also been selected from the NHS to provide a benchmark for outcomes of the immigrant groups. The Canadian-born individuals were aged 25 to 64, and married or living in a common-law relationship in 2011. For brevity, the remainder of this study will use "married" to refer to married individuals **and** those living in a common-law relationship.

5. These three groups form the bulk of economic class immigration. Business immigrants and live-in caregivers, who are also economic immigrants, are excluded from this study because their labour market activity differs from that of other economic immigrants, given the immigration programs by which they arrive.

Previous research identified four immigrant characteristics at the time of landing that are important predictors of subsequent earnings. These are age at arrival, education level, knowledge of official languages and Canadian work experience prior to landing (Bonikowska, Hou and Picot 2015).[6] Information on pre-landing Canadian experience is not available in the NHS–ILF dataset; the comparison of characteristics at landing of the various immigrant groups of interest focuses on the remaining three characteristics.

Information on education level and knowledge of official languages at landing comes from the ILF. Knowledge of official languages at the time of landing is derived from two separate variables: the immigrant's mother tongue and self-declared knowledge of official languages. Information about age at immigration comes from the NHS data.

Labour market outcomes explored in this study focus on employment and earnings in 2010. The earnings measure used in the analysis is weekly earnings, calculated as the combined total earnings from paid employment and net self-employment income divided by the number of weeks worked in 2010. This measure reflects both the hourly rate of pay and the number of hours worked in a week and is calculated only for individuals who worked at least one week in 2010. A second measure of earnings explored, defined for both those who worked and those who did not work in 2010, is the overall weekly earnings. This measure is a better reflection of overall economic well-being in the population. Since the overall weekly earnings are transformed into log earnings for the purposes of regression analysis, individuals with zero weekly earnings were assigned $1 in earnings to allow the log transformation.

Employment in 2010 is defined as having worked at least one week in 2010. Additional descriptive statistics are provided for full-time, full-year employment, defined as having worked at least 49 weeks in 2010 and having worked mostly full-time weeks.

4 Methods

In addition to descriptive statistics, this study includes regression analysis for three outcomes of interest: (1) the probability of having worked in 2010; (2) weekly earnings of those who worked in 2010; and (3) overall weekly earnings for the whole sample, including individuals with zero earnings in 2010.

Ordinary least squares regression models were estimated for log weekly earnings conditional on being employed and log overall weekly earnings. Probit models were estimated for the probability of having been employed in 2010, and the average marginal effects of covariates of interest are reported.

The control variables in regression analysis pertain to characteristics measured in or derived from information in the NHS. The human capital characteristics controlled for include the following:

- highest completed level of education;
- official languages ability (based on information about mother tongue being English and/or French or other, and self-reported ability to conduct a conversation in one, both or neither of the official languages);

6. These four characteristics do not account for a large share of variation in immigrant earnings; rather, they are the most important among available observed characteristics.

- potential Canadian work experience;[7]
- potential foreign work experience;[8]
- the country in which the highest level of postsecondary education was completed, if any.[9]

All multivariate models also include indicators for visible minority status and area of residence in Canada. Earnings models conditional on employment also included two job characteristics—having worked mostly part time and broad occupation groups. Employment models were estimated with additional controls for the presence of children aged 2 or younger and whether the person attended school between September 2010 and May 2011. The full sets of estimates from these models are presented in Appendix Tables 1 to 3 and 5 to 7.

In addition, models of log overall weekly earnings were re-estimated, allowing economic returns to education to vary across the groups being compared. The objective was not to estimate returns to education in the causal sense, but rather to explore whether or not there are systematic differences between groups in economic outcomes for a given level of education.

5 Economic immigrants: Differences by gender and principal applicant status

To put in context the comparison between women who arrived as spouses of economic immigrant principal applicants and married women who arrived in the family class, characteristics and labour market outcomes are compared between principal applicants and their spouses. This is done separately for immigrant couples where the principal applicant was male, and for couples where the principal applicant was female.

5.1 Descriptive statistics

The education level and knowledge of official languages at landing were generally higher among principal applicants than among accompanying spouses regardless of gender (Table 1). About three-quarters of principal applicants, both men and women, had a bachelor's degree or a graduate degree at the time of landing, compared with approximately 55% of spouses. There were fewer than 10% of principal applicants whose highest education level was high school or less. This number rose to over 20% among the spouses, higher among women than among men. Between 14% and 16% of principal applicants knew neither English nor French, compared with about 23% of male spouses and about 30% of female spouses. Female principal applicants also tended to be somewhat older than female spouses. The descriptive statistics in Table 1 are consistent with the notion that, when couples apply for immigration, the person who better meets the requirements of a particular immigration program applies as the principal applicant.

7. Canadian potential work experience was derived as follows: First, total potential work experience was calculated using the standard formula of age minus total years of schooling minus six. Total years of schooling were the median years of schooling associated with a given level of highest completed education in the 2006 long-form census dataset. Canadian potential work experience was then calculated as the total experience if total experience is lower than or equal to the number of years since immigration, and as years since immigration if total experience is greater than the number of years since immigration.
8. Foreign potential work experience equals zero if total experience is lower than or equal to the number of years since immigration, and equals total experience minus years since immigration if total experience is greater than the number of years since immigration.
9. The countries were grouped as follows: (1) Canada; (2) the United States, the United Kingdom, Australia, New Zealand and Ireland; (3) other northwestern Europe; and (4) all other countries.

The higher levels of human capital among principal applicants than among spouses translate into a higher probability of being employed and a higher probability of working full time, full year. For example, a little over 37% of female spouses worked full time, full year in 2010, compared with a little over 46% of female principal applicants. Principal applicants also had higher earnings, conditional on being employed, than did spouses.

Table 1
Descriptive statistics on selected characteristics at landing and labour market outcomes (unadjusted) in 2010 of economic immigrant principal applicants and spouses, by gender

	Male		Female	
	Principal applicant	Spouse	Principal applicant	Spouse
	percent			
Education level at landing				
High school or less	9.7	22.9	9.6	26.6
Postsecondary below bachelor's degree	15.0	21.2	15.6	19.4
Bachelor's degree	50.5	44.0	54.9	42.9
Master's or Doctorate	24.7	11.8	19.9	11.1
Total	100.0	100.0	100.0	100.0
Mother tongue, knowledge of official languages at landing				
Mother tongue English, unilingual	7.9	8.4	8.3	7.9
Mother tongue French, unilingual	0.7	0.8	0.7	0.8
Mother tongue English or French, knows English and French	2.0	1.6	2.1	1.5
Mother tongue other:				
Knows English	59.4	47.4	51.9	46.9
Knows French	3.5	5.9	4.9	4.7
Knows English and French	10.7	13.0	17.9	7.8
Knows neither English nor French	15.9	22.9	14.2	30.3
Total	100.0	100.0	100.0	100.0
Age at landing				
24 or younger	...	0.3	...	3.0
25 to 29	9.3	9.5	15.6	20.4
30 to 34	28.3	25.7	33.2	32.9
35 to 39	33.5	29.8	31.0	28.3
40 to 45	28.9	25.2	20.2	14.2
Older than 45	...	9.5	...	1.2
Total	100.0	100.0	100.0	100.0
Labour market outcomes in 2010				
Percent employed	91.5	87.7	82.9	73.8
Percent employed full time, full year	60.5	52.5	46.4	37.4
	dollars			
Weekly employment earnings				
Average	1,270	931	858	613
Median	962	690	675	434
Weekly employment earnings, conditional on being employed				
Average	1,385	1,060	1,033	829
Median	1,057	784	802	629

... not applicable

Note: Percentages may not add up to 100.0% because of rounding.

Source: Statistics Canada, the 2011 National Household Survey linked with the Immigrant Landing File.

There is some evidence of a gender gap in labour market outcomes (unadjusted for individual characteristics) of principal applicants.[10] Female principal applicants had average weekly earnings of $1,033 in 2010, conditional on having worked, compared with $1,385 among male principal applicants. They were also less likely to have worked at some point in 2010 than their male counterparts—nearly 83% compared with nearly 92%. Female principal applicants were also about 5 percentage points less likely to have worked than male spouses, and less likely to have worked full time, full year. Among those employed, median weekly earnings (unadjusted) were slightly higher among female principal applicants than among male spouses, but average weekly earnings were not.

5.2 Regression results

The nearly 18-percentage-point gap in the probability of having worked at some point in 2010 is not significantly affected by differences in underlying characteristics between male principal applicants and female spouses (Table 2). Among couples in which the woman was the principal applicant, the men were more likely to have worked in 2010 than the women, by nearly 5 percentage points. Taking into account individual characteristics actually raised this gap to just over 7 percentage points.

Female spouses of principal applicants earned, on average, about 54% less (in log weekly earnings, and conditional on having been employed).[11] Human capital differences did not contribute significantly to this; however, the gap fell to about 29% once part-time work status and occupation were taken into account—roughly a 46% drop. A similar message emerges when overall earnings (including individuals with no earnings) are examined.

Employed female principal applicants earned on average 6% more than employed male spouses (Table 2). After adjusting for individual and job characteristics, this gap was no longer statistically significant. Overall earnings (including zero earners) of male spouses increased relative to those of female principal applicants once differences in human capital were controlled for—a pattern similar to that of employment differences between the two groups.

10. This is in contrast to Sweetman and Warman (2010), who do not find a gender gap in unadjusted earnings among principal applicants in the LSIC data.
11. Reading differences in log earnings as approximately percent differences in earnings is fairly accurate for small differences, but less so for larger differences.

Table 2
Labour market outcomes in 2010 of spouses of economic immigrant principal applicants compared with those of economic immigrant principal applicants

	Gap in probability of having worked in 2010[1]		Gap in log weekly earnings, conditional on having worked in 2010[2]		Gap in log weekly earnings[2]	
	Female spouses relative to male principal applicants	Male spouses relative to female principal applicants	Female spouses relative to male principal applicants	Male spouses relative to female principal applicants	Female spouses relative to male principal applicants	Male spouses relative to female principal applicants
	percentage points			log points		
Unadjusted	-0.177 ***	0.048 ***	-0.542 ***	-0.060 *	-1.571 ***	0.251 ***
Adjusting for						
Individual characteristics	-0.169 ***	0.071 ***	-0.524 ***	0.025	-1.484 ***	0.455 ***
Plus job characteristics	...	...	-0.293 ***	-0.036	...	...
Plus presence of young children and school attendance	-0.170 ***	0.069 ***	...	...	...	...

... not applicable

* significantly different from reference category ($p < 0.05$)

*** significantly different from reference category ($p < 0.001$)

1. Marginal effects from probit models.

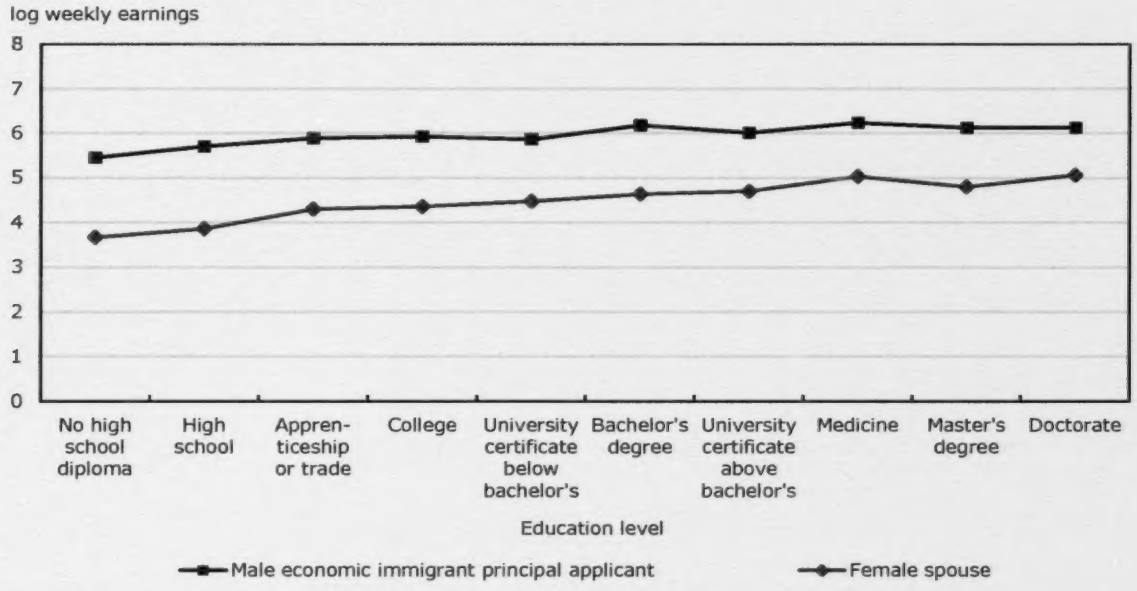
2. Ordinary least squares coefficients.

Source: Statistics Canada, the 2011 National Household Survey linked with the Immigrant Landing File.

Regressions of log overall weekly earnings were also re-run, allowing different returns to education for principal applicants and spouses. Female spouses generally had higher overall earnings returns to education than did male principal applicants (i.e., steeper slope in Chart 1). However, female spouses also had lower earnings than male principal applicants at all levels of education (note that this analysis includes individuals with zero earnings). Female principal applicants also had higher earnings returns to education than did male spouses (Chart 2). However, in contrast to couples with male principal applicants and female spouses, the gender gap in overall earnings between female principal applicants and male spouses was small at higher levels of education.

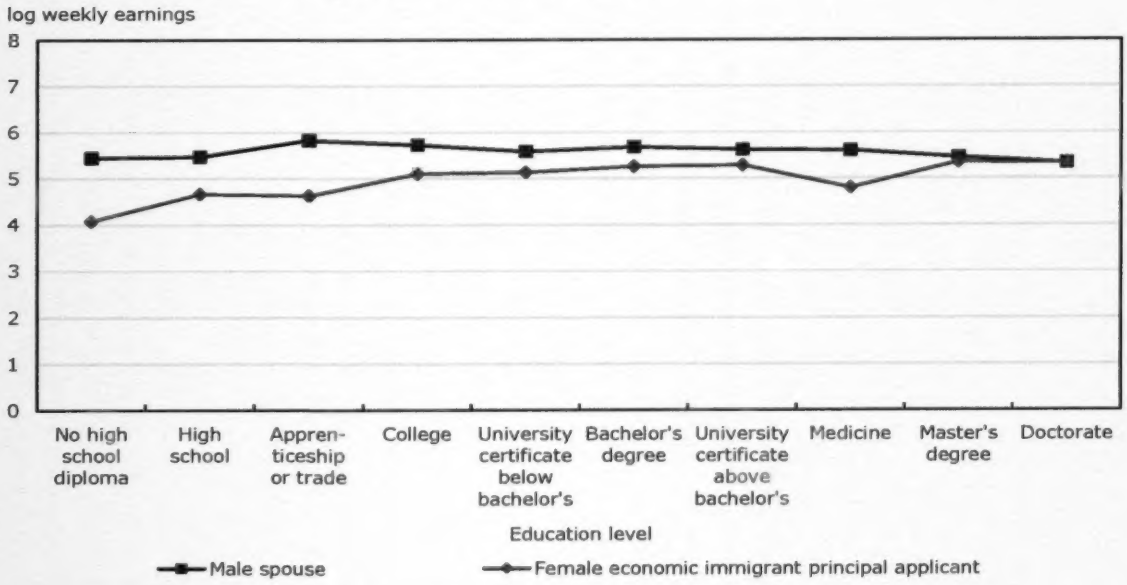
By way of comparison, among Canadian-born couples, overall earnings rose with education level for both genders. Women had higher returns to education (in term of overall earnings) than men, and the gap in average earnings between men and women was reduced at higher levels of education (Chart 3).

Chart 1
Average overall earnings of male economic immigrant principal applicants and female spouses, by education level



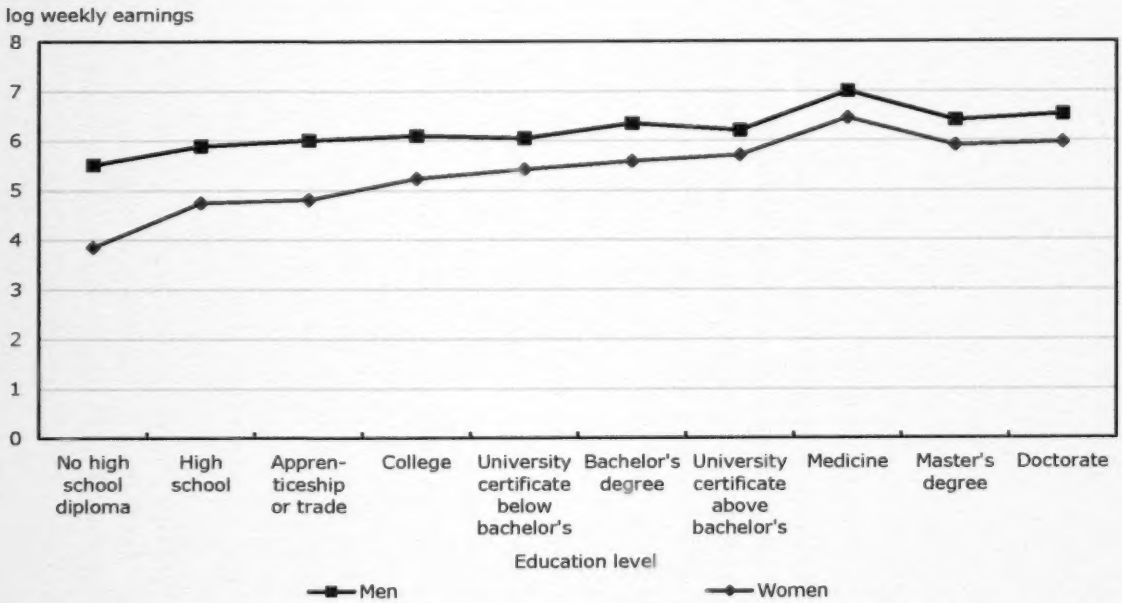
Source: Statistics Canada, the 2011 National Household Survey linked with the Immigrant Landing File.

Chart 2
Average overall earnings of female economic immigrant principal applicants and male spouses, by education level



Source: Statistics Canada, the 2011 National Household Survey linked with the Immigrant Landing File.

Chart 3
Average overall earnings of Canadian-born couples, by gender and education level



Source: Statistics Canada, the 2011 National Household Survey linked with the Immigrant Landing File.

6 Married immigrant women who arrived as dependants: A comparison of economic immigrants and family class

The remainder of this study focuses on women who arrived as spouses of economic immigrant principal applicants[12] and compares their characteristics and labour market outcomes with those of women who arrived in the family class and were married at the time of landing.

6.1 Descriptive statistics

Some 54% of spouses accompanying economic immigrants had a university degree at the time of landing, and about 11% held graduate degrees (Table 3). Almost 27% had a high school diploma or less. Women in the family class had lower levels of education. For example, just over 52% had a high school diploma or less, while about 30% had a university degree. This is partly related to the age difference between the two groups of women in the sample. The economic immigrant spouses in this study were older than the married women in the family class, over a quarter of whom were between the ages of 18 and 24 at the time of landing.

Table 3
Descriptive statistics on selected characteristics at landing of women who arrived as spouses of economic immigrant principal applicants and married women who arrived in the family class

	Female spouses of economic immigrant principal applicants	Married women in the family class
	percent	
Education level at landing		
High school or less	26.6	52.2
Postsecondary below bachelor's degree	19.4	17.3
Bachelor's degree	42.9	23.9
Master's or Doctorate	11.1	6.6
Total	100.0	100.0
Mother tongue, knowledge of official languages at landing		
Mother tongue English, unilingual	7.9	11.6
Mother tongue French, unilingual	0.8	0.7
Mother tongue English or French, knows English and French	1.5	0.9
Mother tongue other:		
Knows English	46.9	39.7
Knows French	4.7	4.3
Knows English and French	7.8	3.4
Knows neither English nor French	30.3	39.4
Total	100.0	100.0
Age at landing		
24 or younger	3.0	27.3
25 to 29	20.4	29.3
30 to 34	32.9	16.9
35 to 39	2[illegible].3	9.3
40 to 45	14.2	6.9
Older than 45	1.2	10.3
Total	100.0	100.0

Note: Percentages may not add up to 100.0% because of rounding.

Source: Statistics Canada, the 2011 National Household Survey linked with the Immigrant Landing File.

12. Specifically, skilled workers, provincial nominees or immigrants in the Canadian experience class.

Knowledge of official languages was also more common among economic immigrant spouses than among those in the family class. About 30% of economic immigrant spouses reported knowing neither English nor French at the time of landing. The same was true of about 39% of women in the family class.

While the human capital levels, as measured by education level and knowledge of official languages at landing, were higher among the economic immigrant spouses than among married women in family class, it is possible that with time spent in Canada, these differences have diminished, especially considering the much younger ages of women in the family class. However, in 2011 at age 25 or older, close to 39% of women in the family class reported having a high school diploma or less compared with close to 16% of the economic immigrant spouses.[13]

Given the differences in human capital characteristics at landing documented in the previous section, the next question is how these translate into differences in labour market outcomes. Selected labour market outcomes for the year 2010 are presented in Table 4. These numbers are not adjusted for any underlying differences in characteristics between the two groups of women. In Appendix Table 4, most statistics are further broken down by years since landing. One must keep in mind, however, that any patterns observed across years since landing could be the result both of time spent in Canada and of cohort effects.

13. Note that the 2011 statistics come from the NHS, while the characteristics at landing come from landing records. It is likely that at least some of the difference in these numbers comes from their being based on data from two different sources, and does not result entirely from education upgrading by the individuals in the sample.

Table 4
Descriptive statistics on labour market outcomes (unadjusted) in 2010 of women who arrived as spouses of economic immigrant principal applicants and married women who arrived in the family class

	Female spouses of economic immigrant principal applicants	Married women in the family class
	percent	
Percent employed at some point during the year	73.8	65.8
Percent employed full time, full year	37.4	29.9
Percent employed mostly full time, conditional on being employed	75.7	74.0
	dollars	
Average weekly employment income	613	490
Average weekly employment income, conditional on being employed	829	742
	percent	
Percent of university educated working in occupations not requiring a university education[1]	61.9	61.6
Occupation		
Management	7.8	6.7
Administrative	23.7	19.8
Natural and applied sciences	8.7	3.7
Health	11.0	9.9
Education and social services	16.5	13.5
Art, culture, recreation and sport	2.4	2.4
Sales and services	23.3	31.5
Construction and transport trades	1.1	1.9
Agriculture and natural resources	0.3	1.7
Manufacturing, processing and labour	5.4	8.8
Total	100.0	100.0

1. Excludes those working in management occupations.

Note: Percentages may not add up to 100.0% because of rounding.

Source: Statistics Canada, the 2011 National Household Survey linked with the Immigrant Landing File.

More married women who were economic immigrants than married women in the family class worked at some point in 2010: almost 74% compared with almost 66%. Some 37% of economic immigrant spouses worked full time, full year in 2010, compared with about 30% of women in the family class. Of those who worked, about three-quarters of each group worked mostly full-time weeks. Weekly earnings, whether conditional on being employed or not, were also higher among economic immigrant spouses than among women in the family class.

Married women in the family class were highly concentrated in occupations in sales and services (almost 32%), followed by administrative occupations and occupations in education and social services. A lower share of economic immigrant spouses, about 23%, worked in sales and service occupations, while nearly 9% worked in natural and applied sciences, compared with nearly 4% of those in the family class. Among women with a university degree, some 62% of each group were employed in occupations that typically do not require a university degree.[14]

Both groups of immigrant women were less likely to work and earned less than the Canadian-born comparison group. Canadian-born women earned on average $944 per week (conditional on being employed), compared with $829 for the economic immigrant spouses and $742 for women in the family class. Close to 82% of them had worked at some point in 2010, and of those, a little over 77% worked mostly full-time weeks.

14. The education level typically required in an occupation was obtained from the National Occupational Classification.

6.2 Regression results

The gap in the probability of having been employed at some point in 2010 between economic immigrant female spouses and married women in the family class was 8 percentage points, when no adjustment for differences in underlying characteristics was made (Table 5). After adjusting for individual characteristics (human capital variables, visible minority status and area of residence), and for the presence of young children and for having attended school in the previous year, the gap was reduced to a little less than 3 percentage points. That is, differences in characteristics between economic immigrant female spouses and family class married women accounted for about 66% of the observed gap.

Table 5
Labour market outcomes in 2010 of women who arrived as spouses of economic immigrant principal applicants compared with those of married women who arrived in the family class

	Gap in probability of having worked in 2010[1]	Gap in log weekly earnings, conditional on having worked in 2010[2]	Gap in log weekly earnings[2]
	percentage points	log points	
Unadjusted	0.080 ***	0.180 ***	0.604 ***
Adjusting for			
Individual characteristics	0.032 ***	0.094 ***	0.261 ***
Plus job characteristics	...	0.057 **	...
Plus presence of young children and school attendance	0.027 ***	...	...

... not applicable

** significantly different from reference category ($p < 0.01$)

*** significantly different from reference category ($p < 0.001$)

1. Marginal effects from probit models.

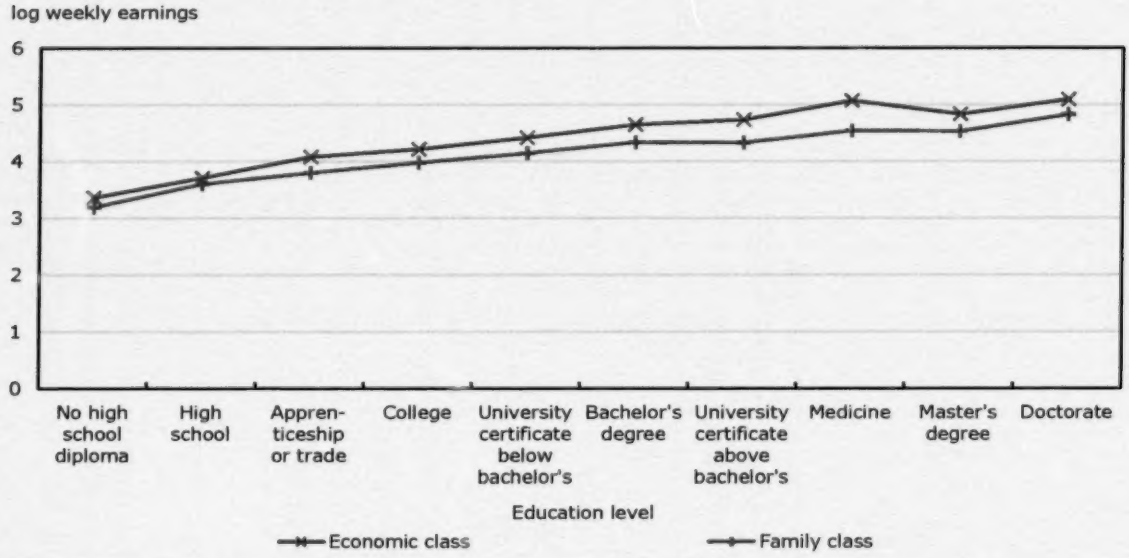
2. Ordinary least squares coefficients.

Source: Statistics Canada, the 2011 National Household Survey linked with the Immigrant Landing File.

Economic immigrant spouses earned about 18% more than women in family class, conditional on working and without adjusting for differences in characteristics. Once individual characteristics were controlled for, the gap was reduced by nearly half. Controlling further for differences in the incidence of working part time and for occupation reduced the gap to a little less than 6%. Overall, differences in individual and selected job characteristics accounted for about 68% of the gap in log weekly earnings between the two groups of women. Differences in individual characteristics also accounted for nearly 57% of the gap in overall earnings.

Overall earnings of high school graduates were not statistically significantly different between economic and family class immigrants after adjustment for differences in characteristics (Chart 4). However, returns to postsecondary education in overall earnings were generally higher for economic immigrant spouses.

Chart 4
Average overall earnings of women who arrived as spouses of economic immigrant principal applicants and married women who arrived in the family class, by education level



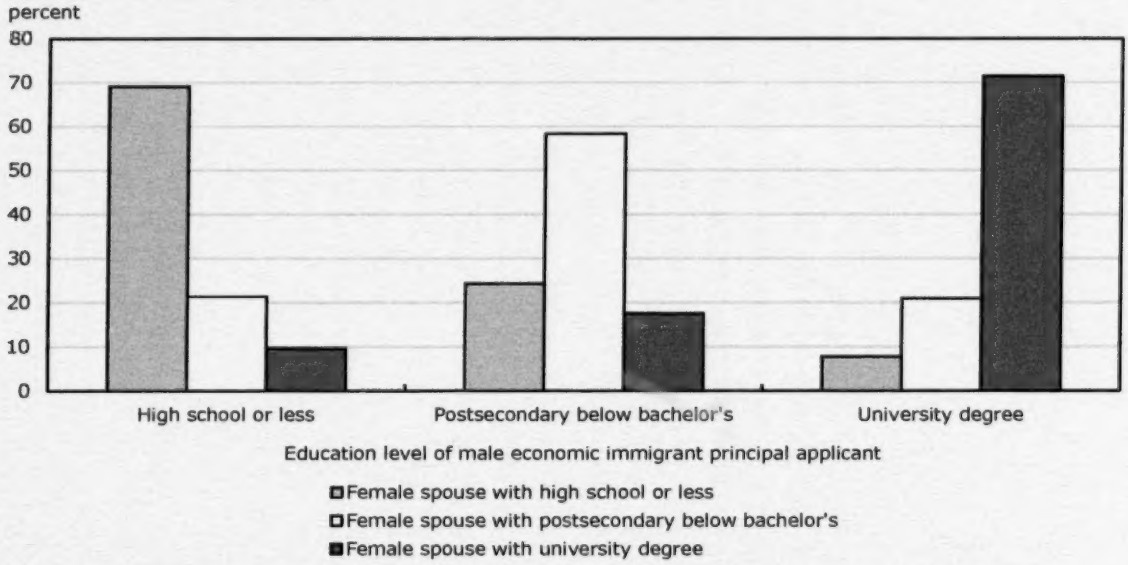
Source: Statistics Canada, the 2011 National Household Survey linked with the Immigrant Landing File.

7 Assortative mating on education

Historically, the points system of immigrant selection in Canada did not give principal applicants points for the characteristics of an accompanying spouse, and a limited number of such points were introduced during the 2000s. Despite this, education levels and knowledge of official languages were higher among women who arrived as spouses of economic immigrant principal applicants than among married women who arrived in the family class. This is consistent with the presence of positive assortative mating. Principal applicants selected by the points system for their human capital characteristics, like education, had chosen spouses with levels of education similar to their own.

Among university-educated principal applicants who were married (or living common law) at the time of immigration, just over 70% had spouses with a university education (Chart 5). At the same time, almost 70% of married principal applicants with a high school diploma or less had spouses with a high school diploma or less.

Chart 5
Percent distribution of education among female spouses of male economic immigrant principal applicants, by education level of the principal applicant, 2011



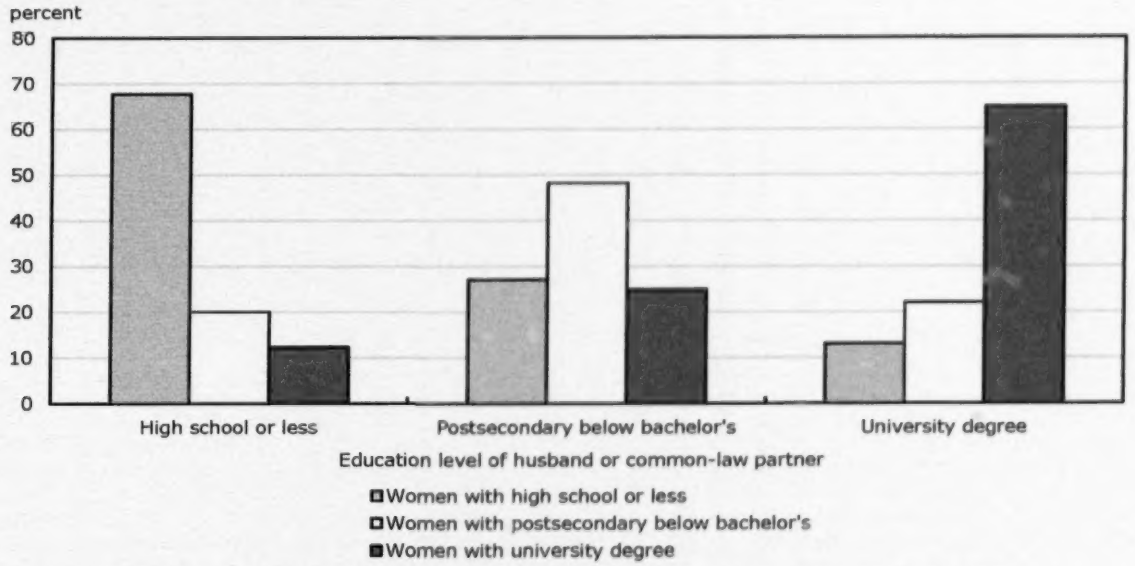
Source: Statistics Canada, the 2011 National Household Survey linked with the Immigrant Landing File.

To compare the degree of assortative mating on education between women who arrived as dependants of economic immigrants and women who arrived in the family class, the spouses of the latter group must be identified. Spouses of women in the family class at the time of their landing in Canada cannot be identified in the data. Instead, the analysis in this section focuses on those women who were both married at the time of landing, and married in 2011, whether or not the male spouse or partner changed between these two dates. The couples that could be identified in this way were further restricted to those aged 25 to 64 in 2011, for consistency with the age restriction used elsewhere in this study. The final sample consists of 42,073 couples.

Among these couples, the degree of assortative mating was somewhat lower than among economic immigrant couples (Chart 6). About 65% of men with a university education had spouses—women who immigrated to Canada in the family class—who also had a university education. Fewer than half of men with postsecondary education below a bachelor's degree had similarly educated spouses, while about a quarter had a university-educated spouse.

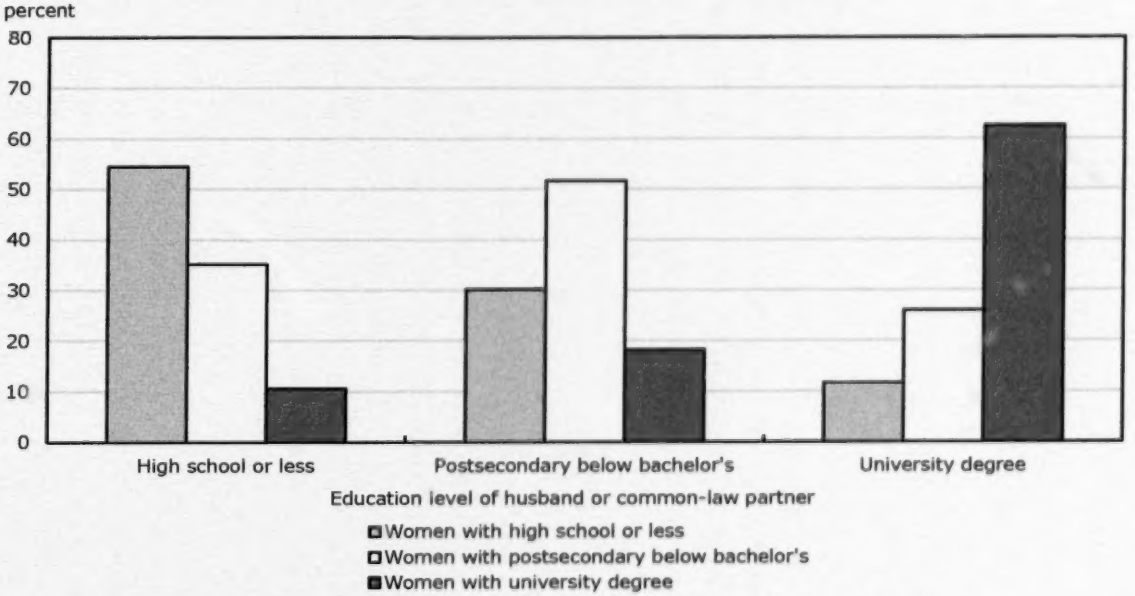
To put these numbers in context, consider the correlation in education levels between Canadian-born husbands and wives (or common-law partners). Just over 60% of Canadian-born men with a university education had wives with a university education, and about 55% of men with a high school diploma or less had wives with a similar level of education (Chart 7).

Chart 6
Percent distribution of education among women who arrived in the family class, by education level of their husbands or common-law partners, 2011



Source: Statistics Canada, the 2011 National Household Survey linked with the Immigrant Landing File.

Chart 7
Percent distribution of education among Canadian-born women, by education level of their husbands or common-law partners, 2011



Source: Statistics Canada, the 2011 National Household Survey linked with the Immigrant Landing File.

To explore further the similarity of education within couples among immigrants and the Canadian-born, a probit model was estimated where the dependent variable was equal to one if the education level was the same within the couple, and zero otherwise. Education was classified into the same three categories as in the charts above. The independent variables comprised a dummy variable for immigrants, the husband or male partner's education level and age, and the wife or female partner's education and age. The model was estimated on two samples: (1) a sample of Canadian-born men and male economic immigrant principal applicants; and (2) a sample of Canadian-born men and immigrant men married to a female immigrant who arrived in the family class.

The models confirm the general patterns observed in the descriptive charts above. Economic immigrant principal applicants had a higher probability, by an estimated 9.7 percentage points, of having a spouse or common-law partner with a similar level of education than Canadian-born men. This difference was statistically significant ($p < 0.001$). The gap was lower, but still statistically significant, at 5.2 percentage points, between couples where the woman was a family class immigrant and Canadian-born couples.

8 Conclusion

The majority of married women who arrive in Canada as economic immigrants are spouses accompanying economic immigrant principal applicants and, as such, are not selected by the immigration system in the same way that principal applicants are. This study shows that compared with male and female economic principal applicants and male spouses, women who arrived as spouses of economic principal applicants had lower levels of education and knowledge of official languages at landing and lower levels of employment and earnings after landing. Differences in human capital do not appear to have accounted for much of the observed employment gap between male principal applicants and female spouses, nor for much of the earnings gap between them. Occupation and incidence of part-time employment, however, accounted for a substantial part of the earnings gap between the two groups.

Compared with married women who arrived in the family class, female spouses of economic principal applicants had higher levels of education and knowledge of official languages at landing, and higher employment and earnings after landing. Higher levels of human capital accounted for (along with visible minority status and area of residence) some 60% of the gap in employment observed between economic immigrant spouses and married women who arrived in the family class, and for nearly half of the log earnings gap between them. Differences in the incidence of part-time employment and occupation accounted for a further 20% of the gap in earnings.

The results of the study are consistent with the idea that the economic immigration programs, which assess and select principal applicants based on perceived ability to integrate into the Canadian labour market, indirectly also selected immigrant spouses. This is related to positive assortative mating. These spouses had higher levels of human capital and labour market involvement than married women who arrived in the family class.

9 Appendix

9.1 Sample selection

The sample of spouses of economic immigrant principal applicants was selected as follows. First, principal applicants were selected if they

- arrived as skilled workers, provincial nominees, or in the Canadian experience class
- were 25 to 45 years old at the time of immigration
- were no older than 64 years old in 2011
- had landed in Canada between 1990 and 2009
- were married or in a common-law relationship at the time of landing.

While there were very few principal applicants younger than 25 at landing, there were some who were older than 45 at landing. The 25-to-45 age bracket was chosen because the intent of this study is to focus on prime-working-age individuals and to ensure a more consistent age distribution across landing years, given that economic outcomes were only observed in 2010/2011 for all landing cohorts.

Given available data, spouses of these principal applicants at the time of landing can be identified only if they share the same application for immigration number. Thus, the analysis focuses exclusively on principal applicants and the spouses who arrived with them on the same application. Principal applicants whose application number was missing in the data were excluded, as were principal applicants who shared the same application number with another principal applicant.

Next, individuals identified in landing records as spouses or common-law partners of a principal applicant, and who arrived as skilled workers, provincial nominees or in the Canadian experience class, who were married or in a common-law relationship at the time of landing, and who were at least 18 years old at landing, were selected. Spouses with missing application numbers and spouses who shared the same application number with another spouse were excluded.

When the principal applicant and spouse samples were merged, matches were found for about 85% of the principal applicants.

Further restrictions on the couples selected for the study sample included the following: both members of the couple had the same immigration category, both landed between 1990 and 2009, and both were aged 25 to 64 in 2011. The study focuses on intact couples, i.e., couples who applied for immigration as a family, were still living in the same household in 2011, and whose census family indicator in the NHS was consistent with these restrictions.[15]

15. If an immigrant couple separated and lived apart in 2011, and one spouse filled out the NHS while the other did not, this couple, or either of the spouses, are not included in this study.

9.2 Tables

Appendix Table 1
Marginal effects from probit models of employment in 2010 for economic immigrant principal applicants and their spouses

	Male principal applicant, female spouse			Female principal applicant, male spouse		
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
			percentage points			
Spouse	-0.177 ***	-0.169 ***	-0.170 ***	0.048 ***	0.071 ***	0.069 ***
Highest completed level of education (reference: high school)						
No high school diploma	...	-0.017	-0.017	...	-0.014	-0.016
Apprenticeship or trade	...	0.058 ***	0.054 ***	...	0.039 *	0.038 *
College	...	0.046 ***	0.045 ***	...	0.042 ***	0.040 ***
University certificate below bachelor's	...	0.056 ***	0.057 ***	...	0.020	0.020 †
Bachelor's degree	...	0.068 ***	0.066 ***	...	0.017	0.015
University certificate above bachelor's	...	0.069 ***	0.067 ***	...	0.019	0.020
Medicine	...	0.068 ***	0.065 ***	...	-0.052 *	-0.056 *
Master's degree	...	0.071 ***	0.067 ***	...	0.019	0.019
Doctorate	...	0.073 ***	0.066 ***	...	-0.001	-0.013
Mother tongue and ability to speak official languages (reference: mother tongue other, English)						
Mother tongue English, unilingual	...	0.029 ***	0.029 ***	...	0.032 ***	0.033 ***
Mother tongue French, unilingual	...	0.006	0.015	...	-0.020	-0.012
Mother tongue English or French, bilingual	...	0.025 *	0.030 **	...	0.026 †	0.029 †
Mother tongue other, French	...	-0.032 **	-0.021 *	...	-0.042 *	-0.033 *
Mother tongue other, bilingual	...	0.006	0.012	...	-0.010	-0.003
Mother tongue other, neither	...	-0.069 ***	-0.071 ***	...	-0.114 ***	-0.115 ***
Canadian experience	...	0.007 ***	0.005 ***	...	0.010 ***	0.006 ***
Foreign experience	...	-0.002 ***	-0.003 ***	...	-0.005 ***	-0.006 ***
Location of postsecondary education (reference: all other countries)						
Canada	...	0.038 ***	0.045 ***	...	0.016 †	0.022 **
English-speaking developed[1]	...	0.002	-0.002	...	0.017	0.010
Other Northwestern Europe	...	0.036 ***	0.032 **	...	0.059 ***	0.056 ***
Visible minority	...	-0.052 ***	-0.051 ***	...	-0.048 ***	-0.045 ***
Presence of children under age 2	...	...	-0.075 ***	...	...	-0.100 ***
Attended school in 2010/2011	...	...	-0.080 ***	...	...	-0.103 ***
Geographic location included in the model	no	yes	yes	no	yes	yes
			number			
Sample size	78,490	78,490	78,490	24,122	24,112	24,112

... not applicable

* significantly different from reference category ($p < 0.05$)

** significantly different from reference category ($p < 0.01$)

*** significantly different from reference category ($p < 0.001$)

† significantly different from reference category ($p < 0.10$)

1. The United States, the United Kingdom, Australia, New Zealand and Ireland.

Source: Statistics Canada, the 2011 National Household Survey linked with the Immigrant Landing File.

Appendix Table 2
Ordinary least squares coefficients from regressions of 2010 log weekly earnings of economic immigrant principal applicants and their spouses

	Male principal applicant, female spouse			Female principal applicant, male spouse		
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
	coefficient					
Spouse	-0.542 ***	-0.524 ***	-0.293 ***	-0.060 *	0.025	-0.036
Highest completed level of education (reference: high school)						
No high school diploma	...	-0.112 †	-0.108 †	...	-0.061	-0.069
Apprenticeship or trade	...	-0.006	-0.003	...	0.048	-0.003
College	...	0.110 **	0.064	...	0.036	0.003
University certificate below bachelor's	...	0.081 *	0.012	...	0.112 †	0.059
Bachelor's degree	...	0.276 ***	0.162 ***	...	0.264 ***	0.169 **
University certificate above bachelor's	...	0.211 ***	0.096 *	...	0.244 ***	0.134 †
Medicine	...	0.569 ***	0.287 ***	...	0.488 ***	0.261 **
Master's degree	...	0.308 ***	0.181 ***	...	0.205 **	0.122 †
Doctorate	...	0.347 ***	0.216 ***	...	0.257 *	0.111
Mother tongue and ability to speak official languages (reference: mother tongue other, English)						
Mother tongue English, unilingual	...	0.173 ***	0.182 ***	...	0.295 ***	0.296 ***
Mother tongue French, unilingual	...	0.063	0.124	...	0.115	0.146
Mother tongue English or French, bilingual	...	0.160 **	0.216 ***	...	0.247 **	0.315 ***
Mother tongue other, French	...	-0.025	0.023	...	0.137 †	0.175 *
Mother tongue other, bilingual	...	0.056	0.090 *	...	0.120 *	0.137 **
Mother tongue other, neither	...	-0.360 ***	-0.319 ***	...	-0.326 ***	-0.245 **
Canadian experience	...	0.066 ***	0.038 ***	...	0.081 ***	0.047 ***
Canadian experience squared	...	-0.002 ***	-0.001 ***	...	-0.003 ***	-0.002 **
Foreign experience	...	-0.004	-0.001	...	-0.010	-0.007
Foreign experience squared	...	0.000	0.000	...	0.000	0.000
Location of postsecondary education (reference: all other countries)						
Canada	...	0.172 ***	0.133 ***	...	0.139 **	0.131 **
English-speaking developed[1]	...	0.102 **	0.106 **	...	0.148 *	0.136 *
Other Northwestern Europe	...	0.030	0.041	...	-0.100	-0.075
Visible minority	...	-0.164 ***	-0.130 ***	...	-0.019	-0.005
Worked mostly part-time in 2010	...	...	-0.967 ***	...	...	-0.998 ***
Occupation (reference: management)						
Administrative	...	...	0.092 **	...	...	0.037
Natural and applied sciences	...	...	0.389 ***	...	...	0.386 ***
Health	...	...	0.442 ***	...	...	0.416 ***
Education and social services	...	...	-0.035	...	...	-0.002
Art, culture, recreation and sport	...	...	-0.450 ***	...	...	-0.616 ***
Sales and services	...	...	-0.214 ***	...	...	-0.241 ***
Construction and transport trades	...	...	-0.077 *	...	...	-0.035
Agriculture and natural resources	...	...	-0.048	...	...	-0.030
Manufacturing, processing and labour	...	...	0.023	...	...	0.023
Geographic location included in the model	no	yes	yes	no	yes	yes
Constant	6.607 ***	6.200 ***	6.316 ***	6.351 ***	5.783 ***	6.064 ***
	number					
Sample size	65,006	65,006	65,006	20,611	20,611	20,611

... not applicable

* significantly different from reference category ($p < 0.05$)

** significantly different from reference category ($p < 0.01$)

*** significantly different from reference category ($p < 0.001$)

† significantly different from reference category ($p < 0.10$)

1. The United States, the United Kingdom, Australia, New Zealand and Ireland.

Source: Statistics Canada, the 2011 National Household Survey linked with the Immigrant Landing File.

Appendix Table 3
Ordinary least squares coefficients from regressions of 2010 log weekly overall earnings of economic immigrant principal applicants and their spouses

	Male principal applicant, female spouse		Female principal applicant, male spouse	
	Model 1	Model 2	Model 3	Model 4
	coefficient			
Spouse	-1.571 ***	-1.484 ***	0.251 ***	0.455 ***
Highest completed level of education (reference: high school)				
No high school diploma	...	-0.208 *	...	-0.193
Apprenticeship or trade	...	0.390 ***	...	0.290 *
College	...	0.426 ***	...	0.306 **
University certificate below bachelor's	...	0.469 ***	...	0.239 *
Bachelor's degree	...	0.702 ***	...	0.354 ***
University certificate above bachelor's	...	0.642 ***	...	0.342 **
Medicine	...	0.943 ***	...	0.098
Master's degree	...	0.735 ***	...	0.313 **
Doctorate	...	0.758 ***	...	0.260
Mother tongue and ability to speak official languages (reference: mother tongue other, English)				
Mother tongue English, unilingual	...	0.331 ***	...	0.466 ***
Mother tongue French, unilingual	...	0.077	...	-0.048
Mother tongue English or French, bilingual	...	0.294 ***	...	0.400 **
Mother tongue other, French	...	-0.281 ***	...	-0.196
Mother tongue other, bilingual	...	0.090	...	0.037
Mother tongue other, neither	...	-0.779 ***	...	-0.962 ***
Canadian experience	...	0.226 ***	...	0.279 ***
Canadian experience squared	...	-0.008 ***	...	-0.011 ***
Foreign experience	...	-0.009	...	0.007
Foreign experience squared	...	-0.001 †	...	-0.002 ***
Location of postsecondary education (reference: all other countries)				
Canada	...	0.396 ***	...	0.226 ***
English-speaking developed[1]	...	0.101 *	...	0.231 *
Other Northwestern Europe	...	0.233 **	...	0.317 *
Visible minority	...	-0.463 ***	...	-0.324 ***
Geographic location included in the model	no	yes	no	yes
Constant	6.049 ***	4.781 ***	5.265 ***	4.081 ***
	number			
Sample size	78,490	78,490	24,122	24,122

... not applicable

* significantly different from reference category ($p < 0.05$)

** significantly different from reference category ($p < 0.01$)

*** significantly different from reference category ($p < 0.001$)

† significantly different from reference category ($p < 0.10$)

1. The United States, the United Kingdom, Australia, New Zealand and Ireland.

Source: Statistics Canada, the 2011 National Household Survey linked with the Immigrant Landing File.

Appendix Table 4
Descriptive statistics on labour market outcomes (unadjusted) in 2010 of women who arrived as spouses of economic immigrant principal applicants and married women who arrived in the family class, by years since landing

	Female spouses of economic immigrant principal applicants	Married women in the family class
	percent	
Percent employed at some point during the year		
5 or fewer years since landing	64.4	60.1
6 to 10	76.4	63.6
11 to 15	78.1	67.9
16 to 21	75.7	73.2
Percent employed full time, full year		
5 or fewer years since landing	23.6	21.6
6 to 10	38.4	28.0
11 to 15	45.1	33.1
16 to 21	44.5	38.7
Percent employed mostly full time, conditional on being employed		
5 or fewer years since landing	68.4	69.2
6 to 10	75.6	73.6
11 to 15	79.7	75.7
16 to 21	78.8	77.3
	dollars	
Average weekly employment income		
5 or fewer years since landing	435	398
6 to 10	621	451
11 to 15	722	555
16 to 21	702	583
Average weekly employment income, conditional on being employed		
5 or fewer years since landing	674	660
6 to 10	810	706
11 to 15	923	817
16 to 21	926	794
	percent	
Percent of university educated working in occupations not requiring a university education[1]		
5 or fewer years since landing	68.6	67.2
6 to 10	63.2	61.3
11 to 15	57.9	57.7
16 to 21	52.9	57.5

1. Excludes those working in management occupations.

Source: Statistics Canada, the 2011 National Household Survey linked with the Immigrant Landing File.

Appendix Table 5
Marginal effects from probit models of employment of women who arrived as spouses of economic immigrant principal applicants and married women who arrived in the family class

	Model 1	Model 2	Model 3
		percentage points	
Economic class	0.080 ***	0.032 ***	0.027 ***
Highest completed level of education (reference: high school)			
No high school diploma	...	-0.052 ***	-0.049 ***
Apprenticeship or trade	...	0.058 ***	0.053 ***
College	...	0.058 ***	0.055 ***
University certificate below bachelor's	...	0.080 ***	0.077 ***
Bachelor's degree	...	0.091 ***	0.086 ***
University certificate above bachelor's	...	0.105 ***	0.099 ***
Medicine	...	0.112 ***	0.105 ***
Master's degree	...	0.113 ***	0.106 ***
Doctorate	...	0.158 ***	0.148 ***
Mother tongue and ability to speak official languages (reference: mother tongue other, English)			
Mother tongue English, unilingual	...	0.046 ***	0.046 ***
Mother tongue French, unilingual	...	0.034 *	0.049 **
Mother tongue English or French, bilingual	...	0.064 ***	0.071 ***
Mother tongue other, French	...	-0.018	-0.008
Mother tongue other, bilingual	...	0.034 ***	0.039 ***
Mother tongue other, neither	...	-0.052 ***	-0.051 ***
Canadian experience	...	0.009 ***	0.006 ***
Foreign experience	...	-0.001 *	-0.002 ***
Location of postsecondary education (reference: all other countries)			
Canada	...	0.093 ***	0.097 ***
English-speaking developed[1]	...	-0.002	-0.003
Other Northwestern Europe	...	0.046 **	0.042 **
Visible minority	...	-0.055 ***	-0.054 ***
Presence of children aged 2 or younger	...	...	-0.149 ***
Attended school from September 2010 to May 2011	...	...	-0.061 ***
Geographic location included in the model	no	yes	yes
		number	
Sample size	92,086	92,086	92,086

... not applicable

* significantly different from reference category ($p < 0.05$)

** significantly different from reference category ($p < 0.01$)

*** significantly different from reference category ($p < 0.001$)

1. The United States, the United Kingdom, Australia, New Zealand and Ireland.

Source: Statistics Canada, the 2011 National Household Survey linked with the Immigrant Landing File.

Appendix Table 6
Ordinary least squares coefficients from regressions of 2010 log weekly earnings of women who arrived as spouses of economic immigrant principal applicants and married women who arrived in the family class

	Model 1	Model 2	Model 3
		coefficient	
Economic class	0.180 ***	0.094 ***	0.057 **
Highest completed level of education (reference: high school)			
No high school diploma	...	-0.139 **	-0.122 **
Apprenticeship or trade	...	-0.124 **	-0.120 **
College	...	0.102 **	0.060 †
University certificate below bachelor's	...	0.176 ***	0.116 ***
Bachelor's degree	...	0.375 ***	0.276 ***
University certificate above bachelor's	...	0.334 ***	0.246 ***
Medicine	...	0.667 ***	0.390 ***
Master's degree	...	0.459 ***	0.361 ***
Doctorate	...	0.490 ***	0.360 ***
Mother tongue and ability to speak official languages (reference: mother tongue other, English)			
Mother tongue English, unilingual	...	0.096 ***	0.089 ***
Mother tongue French, unilingual	...	0.176 *	0.158 †
Mother tongue English or French, bilingual	...	0.165 **	0.198 ***
Mother tongue other, French	...	0.086	0.087
Mother tongue other, bilingual	...	0.118 **	0.129 ***
Mother tongue other, neither	...	-0.089 *	-0.084 †
Canadian experience	...	0.057 ***	0.037 ***
Canadian experience squared	...	-0.001 ***	-0.001 **
Foreign experience	...	-0.004	-0.004
Foreign experience squared	...	0.000	0.000
Location of postsecondary education (reference: all other countries)			
Canada	...	0.261 ***	0.180 ***
English-speaking developed[1]	...	0.123 **	0.140 ***
Other Northwestern Europe	...	0.104 †	0.128 *
Visible minority	...	-0.005	-0.022
Worked mostly part time in 2010	...	...	-0.836 ***
Occupation (reference: management)			
Administrative	...	...	0.238 ***
Natural and applied sciences	...	...	0.515 ***
Health	...	...	0.516 ***
Education and social services	...	...	-0.015
Art, culture, recreation and sport	...	...	-0.483 ***
Sales and services	...	...	-0.086 *
Construction and transport trades	...	...	-0.016
Agriculture and natural resources	...	...	-0.153
Manufacturing, processing and labour	...	...	0.076
Geographic location included in the model	no	yes	yes
Constant	5.886 ***	5.321 ***	5.620 ***
		number	
Sample size	64,394	64,394	64,394

... not applicable

* significantly different from reference category ($p < 0.05$)

** significantly different from reference category ($p < 0.01$)

*** significantly different from reference category ($p < 0.001$)

† significantly different from reference category ($p < 0.10$)

1. The United States, the United Kingdom, Australia, New Zealand and Ireland.

Source: Statistics Canada, the 2011 National Household Survey linked with the Immigrant Landing File.

Appendix Table 7
Ordinary least squares coefficients from regressions of 2010 log overall weekly earnings of women who arrived as spouses of economic immigrant principal applicants and married women who arrived in the family class

	Model 1	Model 2
	coefficient	
Economic class	0.604 ***	0.261 ***
Highest completed level of education (reference: high school)		
No high school diploma	...	-0.381 ***
Apprenticeship or trade	...	0.250 ***
College	...	0.413 ***
University certificate below bachelor's	...	0.592 ***
Bachelor's degree	...	0.804 ***
University certificate above bachelor's	...	0.851 ***
Medicine	...	1.141 ***
Master's degree	...	0.995 ***
Doctorate	...	1.271 ***
Mother tongue and ability to speak official languages (reference: mother tongue other, English)		
Mother tongue English, unilingual	...	0.343 ***
Mother tongue French, unilingual	...	0.321 **
Mother tongue English or French, bilingual	...	0.480 ***
Mother tongue other, French	...	-0.060
Mother tongue other, bilingual	...	0.275 ***
Mother tongue other, neither	...	-0.375 ***
Canadian experience	...	0.162 ***
Canadian experience squared	...	-0.004 ***
Foreign experience	...	0.018 ***
Foreign experience squared	...	-0.001 ***
Location of postsecondary education (reference: all other countries)		
Canada	...	0.735 ***
English-speaking developed[1]	...	0.087
Other Northwestern Europe	...	0.330 ***
Visible minority	...	-0.324 ***
Geographic location included in the model	no	yes
Constant	3.874 ***	2.620 ***
	number	
Sample size	92,086	92,086

... not applicable

** significantly different from reference category ($p < 0.01$)

*** significantly different from reference category ($p < 0.001$)

1. The United States, the United Kingdom, Australia, New Zealand and Ireland.

Source: Statistics Canada, the 2011 National Household Survey linked with the Immigrant Landing File.

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